

A deeper understanding of anesthesiology practice: the biopsychosocial perspective

The last three to four decades have seen revolutionary techniques and newer therapeutic modalities in clinical sciences. The progress made in anesthesiology and intensive care over this period has been significant. Evidence-based practices have taken this specialty to newer heights which could not have been even thought off four to five decades back. A deeper understanding of the pathophysiological basis of disease and modern therapeutics has led to an increased collaboration of anesthesiology with other specialties and superspecialties.^[1] However, during this progressive journey, new areas of research and therapeutics are emerging, which need special attention and focus to work upon, so as to improve our current and future anesthesiology practice.

The biopsychological model of health and disease, proposed by Engel, over 30 years ago has been utilized to guide our understanding of both health and disease. Engel in a radical departure from the then (and still!) prevalent biomedical model, proposed that psychological and social aspects of health be given equal importance while assessing the cause and management of disease.^[2]

Over the years, the biopsychosocial model has been discussed, debated, critiqued, and utilized in all specialties of medicine. It has led to a more humanistic, more holistic, and multidimensional approach to medicine, which hopefully has improved the quality of the services we provide to our patients. Though various critics point to its shortcomings,^[3] the model has stood the test of time.^[4]

This model does not advocate a neglect of the biological issues faced by a sick person. Rather, it suggests additional consideration of cultural, spiritual, social psychological, and emotional determinants while managing a person with ill-health.^[2]

While psychiatry has always used this model as the basis of its practice, other medical specialties, notably those dealing with chronic illness, also utilize this ideological platform. In diabetology and in menopause, for example, the term “biopsychosocial” is used frequently.^[5,6] This philosophy is encountered in the domain of pain medicine as well, where psychological determinants of pain perception are now given due consideration by most specialists.^[7]

Beyond this, however, anesthesiology has, on the whole, not made optimal use of this principle of medicine. This is in spite of the fact that the anesthesiologist deals with psychological and social issues in almost every surgical patient. In fact, the patients encountered by the anesthesiologist have a greater degree of biological, psychological, and social morbidity than those encountered by colleagues in outdoor patient care. This stress, caused by a surgical illness, which may or may not be compounded by medical comorbidity, is largely significant in terms of surgical outcome. It is surprising, therefore, that the utility of, biopsychosocial model as a philosophy, as well as measure of good clinical practice, has not been highlighted in anesthesiology journals or literature.

This model conveys to the practicing anesthesiologist a framework in which to plan one's practice. It encompasses internalization of the fact that every patient encountered in the preanesthesia clinic, the preoperative room, the operation theatre, or the recovery room, is more than just a biological being. It includes the realization that each patient has a psychological and social persona, which plays a potential role in modifying the response to anesthesia and changing the pattern of recovery from anesthesio-surgical intervention. The model supports the application of this knowledge in practice, while encouraging gradual, continuous improvement in soft skills, and interaction with patients. It is not that anesthesiologists have never practiced this model. Rather, the adoption of model is not in totality. On a positive side it is often seen that pediatric patients are frequently treated on a similar model during peri-operative period, though the majority of attending anesthesiologists may hardly be aware of the model they are practicing. In other words, the biopsychosocial model promotes the use of patient centered, patient oriented, patient sensitive care.

Access this article online	
Quick Response Code:	Website: www.saudija.org
	DOI: 10.4103/1658-354X.125893

Integrating psycho-sensitive attitudes in anesthesiology has a direct bearing on the biological side of anesthesia as well. A relaxed patient will have less pressor response to surgical stress, and will need lower doses of antihypertensives and sedatives. Lowering the dose of anesthetic medication will allow faster recovery from anesthesia. Lower stress levels will also mean better wound healing and improved surgical outcome. The biological basis for such observations is well researched. The autonomic nervous system, adrenal gland, and inflammatory markers are all linked with stress. Lowering of stress, by improved understanding of psychological issues, will certainly optimize autonomic and adrenal function.

Similarly, addressing of social issues in anesthesiology, and following socio-cultural friendly policies in the preoperative and recovery rooms, may help improve therapeutic outcomes. For example, enhancing visitor privileges, and allowing attendants in noncritical nursing settings may improve biological parameters such as blood pressure and glycemia. This is especially true in socially oriented societies such as Asia and Africa.

Other methods of integrating the biopsychosocial approach in modern anesthesiology include the use of relaxation therapy, cognitive behavioral therapy, and yoga in the preoperative and postoperative phase. Music therapy, empathic listening, and conversation therapy are biopsychosocial interventions which find use in the perioperative period. Recently, music therapy has gained significant popularity, as it can be extremely useful in decreasing the morbidity associated with anesthesia and intensive care.^[8,9]

These aspects of humanistic medical care do not seek to undermine the importance of the pharmaco-biologic aspects of anesthesiology. Rather, they seek to supplement, and improve, the effect of the drugs and procedures

used by the modern anesthesiologist.^[10] Through this editorial, we hope to encourage research and debate in this important, yet less documented, area of anesthesiology.

Sukhminder Jit Singh Bajwa, Sanjay Kalra¹

Department of Anaesthesiology and Intensive Care, Gian Sagar Medical College and Hospital, Ram Nagar, Banur, Punjab, ¹Department of Endocrinology, Bharti Hospital and BRIDE, Karnal, Haryana, India.

E-mail: sukhminder_bajwa2001@yahoo.com

REFERENCES

1. Bajwa SS, Kalra S. Diabeto-anesthesia: A subspecialty needing endocrine introspection. *Indian J Anaesth* 2012;56:513-7.
2. Engel GL. The need for a new medical model: A challenge for biomedicine. *Science* 1977;196:129-36.
3. Ghaemi SN. The rise and fall of the biopsychosocial model. *BJ Psych* 2009;195:3-4.
4. Borrell CF, Suchman AL, Epstein RM. The biopsychosocial model 25 years later: Principle, practice and scientific inquiry. *Ann Fam Med* 2004;2:576-82.
5. Bartz R. Beyond the biopsychosocial model. New approaches to doctor-patient interactions. *J Fam Pract* 1999;48:601-7.
6. Kalra B, Agarwal S, Magon S. Holistic care of menopause: Understanding the framework. *J Mid-life Health* 2012;3:66-9.
7. Korula M. Psychosocial Aspects of Pain Management. *Indian J Anaesth* 2008;52:777.
8. Binns-Turner PG, Wilson LL, Pryor ER, Boyd GL, Prickett CA. Perioperative music and its effects on anxiety, hemodynamics, and pain in women undergoing mastectomy. *AANA J* 2011;79(4 Suppl):S21-7.
9. Trappe HJ. Role of music in intensive care medicine. *Int J Crit Illn Inj Sci* 2012;2:27-31.
10. Bajwa SS, Kalra S. Qualitative research in anesthesiology: An essential practice and need of the hour. *Saudi J Anaesth* 2013;7:477-8.

How to cite this article: Bajwa SS, Kalra S. A deeper understanding of anesthesiology practice: the biopsychosocial perspective. *Saudi J Anaesth* 2014;8:4-5.

Announcement

Android App



Download
**Android
application**

FREE

A free application to browse and search the journal's content is now available for Android based mobiles and devices. The application provides "Table of Contents" of the latest issues, which are stored on the device for future offline browsing. Internet connection is required to access the back issues and search facility. The application is compatible with all the versions of Android. The application can be downloaded from <https://market.android.com/details?id=comm.app.medknow>. For suggestions and comments do write back to us.